

INTERNATIONAL STANDARD

ISO
105-Z09

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Textiles — Tests for colour fastness —

Part Z09:

Determination of cold water solubility of
water-soluble dyes

Textiles — Essais de solidité des teintures —

*Partie Z09: Détermination de la solubilité dans l'eau froide des colorants
solubles dans l'eau*



Reference number
ISO 105-Z09:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 105-Z09 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

ISO 105 was previously published in thirteen "parts", each designated by a letter (e.g. "Part A"), with publication dates between 1978 and 1985. Each part contained a series of "sections", each designated by the respective part letter and by a two-digit serial number (e.g. "Section A01"). These sections are now being republished as separate documents, themselves designated "parts" but retaining their earlier alphanumeric designations. A complete list of these parts is given in ISO 105-A01.

Annex A of this part of ISO 105 is for information only.

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Textiles — Tests for colour fastness —

Part Z09:

Determination of cold water solubility of water-soluble dyes

1 Scope

This part of ISO 105 describes a method for the determination of solubility of water-soluble dyes at 25 °C in aqueous solution without previous heating. The method is not intended to measure absolute solubility.

NOTE 1 Several factors which may influence test results are listed in annex A.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 105 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1773:1976, *Laboratory glassware — Boiling flasks (narrow-necked)*.

ISO 3819:1985, *Laboratory glassware — Beakers*.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

3 Principle

Several solutions of known concentration, including the solubility limit, of the dye to be tested are pre-

pared at 25 °C. The solutions are then filtered under suction at this temperature in a heatable Nutsch filter and the cold water solubility limit determined by visual assessment of the filter residues and the measured flow-through time of the filtrate.

4 Apparatus and reagents

4.1 Glass beaker, capacity 400 ml, conforming to ISO 3819.

4.2 Heating bath, thermostatically controlled, to $25\text{ °C} \pm 2\text{ °C}$, with magnetic stirring bar 40 mm long by 6 mm diameter; speed of stirrer 500 r/min to 600 r/min.

4.3 Nutsch filter (Büchner funnel), heatable, of glass, stainless steel or porcelain; inner diameter 70 mm, capacity at least 200 ml, having more than 100 holes with a total surface area of holes (evenly distributed) of not less than 200 mm².

4.4 Thermostatic device (optional), with circulation pump to adjust temperature of Nutsch filter.

4.5 Vacuum apparatus.

4.5.1 Suction bottle, capacity 1 litre to 2 litres.

4.5.2 Piston or membrane pump, of sufficiently high suction capacity to create a full vacuum of at least 50 kPa under pressure.

4.5.3 Apparatus to adjust and maintain a given vacuum, preferably coupled with a manometer.